

CLAIM AMENDMENTS

IN THE CLAIMS

This listing of the claims will replace all prior versions, and listing, of claims in the application or previous response to office action:

1. (Currently Amended) An integrated circuit comprising function modules, wherein the function modules comprise a central processing unit designed to process data and to execute programs, and a cache memory, wherein the function modules comprise an encryption unit designed to encrypt and decrypt data and the function modules comprise a security sensor system by means of which at least one operating parameter of the integrated circuit is monitored, wherein, as operating parameters, the state of a protective layer on the integrated circuit is monitored such that when a breach of the protective layer is detected, data is automatically deleted from at least one memory of the integrated circuit.

2. (Previously Presented) The integrated circuit according to claim 1, wherein the function modules comprise a random-number generator.

3. (Previously Presented) The integrated circuit according to claim 1, wherein the function modules comprise a first memory in which cryptological keys are stored.

4. (Previously Presented) The integrated circuit according to claim 3, wherein cryptological keys which are stored in the first memory are generated by means of the random-number generator.

5. (Previously Presented) The integrated circuit according to claim 1, wherein function modules comprise a real-time clock.

6. (Previously Presented) The integrated circuit according to claim 1, wherein operating parameters to be monitored additionally is the clock frequency of the real-time clock and/or an operating temperature at a point in the integrated circuit and/or an operating voltage of the integrated circuit.

7. (Previously Presented) The integrated circuit according to claim 1, wherein at least one limit value is predetermined for the operating parameter to be monitored, the operating parameter is measured and compared with the limit value and when the result exceeds or drops below the limit value, the content of the first memory is deleted.

8. (Previously Presented) The integrated circuit according to claim 1, wherein it is arranged in a package and has terminal contacts brought out of the package.

9. (Previously Presented) The integrated circuit according to claim 1, wherein individual function modules have an essentially planar extent and are arranged adjacently to one another in the area of the normal to the surface.

10. (Previously Presented) The integrated circuit according to claim 1, wherein the function modules comprise an integrated voltage regulator which regulates an operating voltage.

11. (Previously Presented) The integrated circuit according to claim 1, wherein it is constructed as semiconductor chip.

12. (Previously Presented) The integrated circuit according to claim 11, wherein semiconductor structures of the individual function modules are intermeshed in the manner of a puzzle in order to avoid individual function modules from being recognizable.

13. (Previously Presented) The integrated circuit according to claim 11, wherein an active protective layer which consists of at least one elongated electrical line which extends along the surface of the die, particularly in mutually parallel tracks section by section, is applied directly to the die of the semiconductor chip.

14. (Previously Presented) An arrangement comprising an integrated circuit as claimed claim 1, wherein the integrated circuit is connected by means of a data bus to a second memory in which data are stored encrypted, wherein the second memory has memory cells which in each case have a memory address and each memory cell can be addressed directly in reading or writing manner.

15. (Previously Presented) The arrangement comprising an integrated circuit as claimed claim 14, wherein the second memory is volatile and is connected to a battery so that the voltage supply is maintained when another power supply is lacking.

16. (Previously Presented) The arrangement comprising an integrated circuit as claimed claim 1, wherein the integrated circuit is connected by means of a data bus to a non-volatile third memory in which data or program code are stored encrypted.

17. (Previously Presented) The arrangement comprising an integrated circuit according to claim 1, wherein the security sensor system is connected to a battery so that the voltage supply is maintained if another power supply is lacking.

18. (Previously Presented) The arrangement comprising an integrated circuit according to claim 1, wherein the security sensor system is connected to an auxiliary power source, integrated in the package, which provides the power for deleting the first memory.

19. (Previously Presented) The arrangement comprising an integrated circuit as claimed claim 16, wherein the third memory is a Flash memory or ROM.

20. **(Currently Amended)** An integrated circuit comprising function modules, wherein the function modules comprise a central processing unit designed to process data and to execute programs, and a cache memory, wherein the function modules comprise an encryption unit designed to encrypt and decrypt data and the function modules comprise a security sensor system by means of which at least one operating parameter of the integrated circuit is monitored, wherein, as operating parameters, the state of a protective layer on the integrated circuit is monitored such that when a breach of the protective layer is detected, data is automatically deleted from at least one memory of the integrated circuit, wherein the function modules comprise a random-number generator and a first memory in which cryptological keys are stored, and wherein cryptological keys which are stored in the first memory are generated by means of the random-number generator.